

### Abstract

A system for particulate removal from fluid streams by using acoustic cavity technology. The technology can be applied to various applications, such as Diesel engine post-combustion emissions control systems, mist filtration systems, particle recovery systems, liquid degassing systems, and closed crankcase ventilation systems. An acoustic cavity can be used to replace an inertial separator, cyclone, or similar particulate removal equipment, providing a considerably lower pressure loss across the cavity compared to an inertial separator or cyclone, because an acoustic cavity does not appreciably alter the fluid flow path.